

REMARKS

By the present amendment, a descriptive sentence referring to Fig. 1 has been added in the specification. Support for this sentence is immediately derived from the figure in light of the original description.

Applicants thank the Examiner for suggesting this amendment. Further, it is submitted that the amendment does not raise any new issues. Accordingly, entry and consideration of the amendment is respectfully requested.

Claims 1-18, 21-35, and 42-51 are pending in the present application. Claims 1, 8, 22, and 42 are the only independent claims.

As a preliminary, reconsideration and withdrawal of the finality of this Office Action is respectfully requested. It is submitted that the rejections made in this Office Action are new rejections that were not caused by amendments made in the last response, as the recitation of the word “alone” was only an express indication already inherent and immediately understood from the test method for measuring the shrinkage force as defined in the original claims and explained in the specification.

In addition, it is submitted that the new rejections are difficult or impossible to address because they include incorrect citations to references used in previous rejections which have now been withdrawn (see, e.g., the alleged citation “insubstantial amount” to Nakamura in the Office Action at page 2, line 16 and to Downey in the Office Action at page 3, line 9: neither Nakamura nor Downey states “insubstantial amount”; this citation was at col. 5, line 41 of previously cited US 4,388,375 to Hopper; see also, e.g., the reference to Hopper in the Office Action at page 3, line 12: Hopper is not included in any rejection discussed in this Office Action). Thus, the rejections

appear to be based at least in part on inaccurate reiterations or expansions of previously made rejections. Accordingly, addressing the new rejections made in a final Office deprives the Applicants of a fair opportunity to address the rejections on the merits.

In view of the above, it is submitted that the finality of the Office Action should be withdrawn.

Nevertheless, Applicants address the rejections as best understood from the Office Action.

In the Office Action, claim 22 is rejected under 35 U.S.C. 102(b) as anticipated by US 5,286,418 to Nakamura et al. ("Nakamura"). It is alleged in the Office Action that Nakamura discloses a single layer polarizer consisting of a hydrophobic polymer having a shrinkage ratio in an "insubstantial amount," referring to Example 2 (col. 60, lines 5-22).

The rejection is respectfully traversed. Example 2 of Nakamura discloses a PET polarizer layer, which has a shrinkage ratio of at most 1% after standing at 80 degrees C and relative humidity of 90% for 500 hours. Nakamura is silent as to any "insubstantial amount" of dimensional change, let alone shrinkage force (as discussed above, this expression was used in the previously cited Hopper reference but is not used in Nakamura; in addition, the "insubstantial amount" of shrinkage in Hopper was for a laminate of a polarizer and its polyester substrate). Indeed, Nakamura is completely silent as to shrinkage force. Thus, Nakamura does not provide any suggestion or guidance regarding a low shrinkage force.

More specifically, a shrinkage ratio of 1% as in the conditions of Example 2 of Nakamura relates to dimensional change, not shrinkage force. Thus, these values do not provide an indication regarding the shrinkage force of the polarizer of Nakamura.

In addition, referring to the "dimensional change rate" values in Table 1 on page 19 of the

present specification, it is impossible to compare the shrinkage ratio values provided in Nakamura with the dimensional changes reported in Table 1 of the present application, because Nakamura provides an indication as to its polarizer as obtained in its Example 2, whereas the dimensional changes of Table 1 are measured on sample polarizing plates. Also, the polarizer of Nakamura is PET, not a hydrophilic film as in the Examples and Comparative Examples reported in Table 1.

In summary, Nakamura, which uses a dry stretching method on a hydrophobic film, is completely silent regarding shrinkage force. As a result, Nakamura does not provide any motivation to attempt a reduction of a shrinkage force of its polarizer. Therefore, present claim 22 is anticipated by, and not obvious over, Nakamura.

In view of the above, it is submitted that the rejection should be withdrawn.

Next, in the Office Action, claims 1-2, 5-6, 21-22, 35, and 42-49 are rejected under 35 U.S.C. 102(b) as anticipated by US 4,818,624 to Downey, Jr. ("Downey"), claims 3-4 are rejected under 35 U.S.C. 103(a) as obvious over Downey, claim 7 is rejected under 35 U.S.C. 103(a) as obvious over Downey in view of US 6,065,457 to Aminaka ("Aminaka"), claims 8-16, 23-28, 42-47, and 50-51 are also rejected under 35 U.S.C. 103(a) as obvious over Downey in view of Aminaka, and claims 17-18 and 29-34 are rejected under 35 U.S.C. 103(a) as obvious over Downey in view of Aminaka and further in view of US 6,361,838 to Miyatake et al. ("Miyatake").

It is alleged in the Office Action that Downey discloses a polarizer with reduced shrinkage at col. 2, lines 25-35, col. 3, lines 48-59, col. 4, lines 15-22, and Table I, and that reducing thickness would be obvious to reduce material costs.

The rejections are respectfully traversed. As discussed above, the passage at col. 2, lines 25-35 of Downey does not state "insubstantial amount" of shrinkage but only mentions that the

stretching process reduces the tensile strength in the transverse direction, so that a support sheet is preferred (col. 2, lines 40-44). Further, Table I at col. 8 of Downey indicates “slight shrinking” for the inventive polarizer samples, as opposed to “severe shrinking” for the comparative samples, but the samples of Downey consist of a laminate of the polarizing film with a polyester substrate (Examples 1-3) or PET substrate (Example 4). Thus, it is clear to the person of ordinary skill in the art that Downey obtains a polarizer having a high shrinkage force, since Downey must laminate a support sheet that is difficult to shrink in order to limit the “severe shrinking” of its polarizer. Further, it is noted that Downey uses a dry stretching step that is not conducive to reducing the shrinkage force of its polarizer. As a result, Downey cannot prevent color irregularity.

In contrast, the present inventors focused on the shrinkage force of a polarizer, namely, the shrinkage force of a polarizer consisting essentially of a stretched hydrophilic polymer film, as recited in present claims 1 and 8, the shrinkage force of a polarizer consisting of a single layer film, as recited in present claim 22, and the shrinkage force of a polarizer prepared according to the steps recited in present claim 42. Again, Applicants urge that controlling the shrinkage force of such polarizer alone is completely different from considering the shrinkage force of a polarizer in a lamination with a support sheet as in Downey. Thus, in the present invention, as recited in present claims 1, 8, 22, and 42, the shrinkage rate of the polarizer is controlled so that the polarizer has a shrinkage force of at most 4.0 N/cm in an absorption axis direction, that shrinkage force being measured on the polarizer itself, not a lamination with a support sheet as in Downey.

As discussed in the present specification, an advantage of the presently claimed invention is that the shrinkage rate of a polarizer and polarizing plate in hot and/or humid conditions can be markedly reduced. For example, the experimental results reported in Tables 1 and 2 on page 19 of

the present specification show that a dimensional change rate of the polarizing plate in the absorption axis direction in the conditions of the test was only from 0.18% to 0.37% in Examples 1-4 (see Table 1, middle column) and that these values provided satisfactory color regularity, whereas the high shrinkage force in Comparative Examples 1-4 lead to increased shrinkage rate of the polarizing plate and increased color irregularity and discoloration. The features of a polarizer having low shrinkage force as recited in the present claims are not taught or suggested in Downey, and the other cited references fail to remedy this deficiency of Downey. Therefore, the present claims are not obvious over Downey taken alone or in any combination with the other cited references.

In view of the above, it is submitted that the rejections should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

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Group Art Unit: 1774

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 50-2866.

Respectfully submitted,

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